

Naval Tactics.

1875

PAMPHLET FILE

Class of December, 1919

Thesis

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Submitted by

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Captain H.K. Cage, U.S. Navy.

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Naval War College
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T A C T I C S.

Tactics is defined by Clausewitz as "The employment of forces in combat."

Mahan says that Strategy ends and Tactics begins when sight contact is made with the enemy and that Tactics ends and Strategy begins when sight contact is lost.

Tactics at sea originated in the days of the galley propelled by oars. At first a sea battle was simply a hand to hand combat between the soldiers carried on board the galleys, both sides trying to lay their vessels alongside those of the enemy in an advantageous position for boarding. Next the galleys were strengthened in the bows in order that they might be used for ramming and in the attack the attempt was made to ram the enemy on the broadside or the stern (the weakest parts). The tactics of the ram led to the formation of the fleets of galleys in lines with bows toward the enemy, in such positions that they were close enough to support each other and prevent the enemy from breaking through the line to attack from the rear. The line which bore the brunt of the attack was further protected from attack from the rear by a support which was supposed to reinforce the first line at any weak point as shown during the progress of the battle.

Next comes the period of sailing ships and the introduction of gunpowder, which, due to the position of the guns in the broadside lead to the line ahead formation in contrast to the line abeam of the galleys.

This line ahead formation is continued to this day although it is not considered as the one and only formation for battle as it was by the French in the days of Nelson.

Concentration of forces for mutual support was shown even in the days of the galleys but the fighting was always ship for ship and concentration of all forces against part of the enemy did not begin to be understood until Clerk had talked and written for years.

In the study of Tactics two forces must be considered, material and moral.

Material forces include, ships, their armor, armament and speed, and men as far as numbers are concerned.

Moral forces include the endurance and resistance to fear of the combatants together with their discipline, and the co-operative habit between the units of the fleet and between superior and subordinate.

In considering material in a tactical sense, we must go back to the field of strategy and logistics, for under these headings the type of ships, their armor, armament, speed and radius of action have been considered and decided as have been the numbers of men and the training they are to have.

Ships may be divided into the following classes:

- (a) Battleships,
 - 1. Dreadnaughts,
 - 2. Predreadnaughts

- (b) Cruisers,
 - 1. Battlecruisers,
 - 2. Armored Cruisers,
 - 3. Protected Cruisers,
 - 4. Light Cruisers.

- (c) Destroyers,
 1. Flotilla Leaders,
 2. Destroyers.
- (d) Submarines,
 1. Fleet,
 2. Coastal,
 3. Mine laying.
- (e) Mine Force,
 1. Mine Layers,
 2. Mine Sweepers.
- (f) Air Craft,
 1. Patrol Planes,
 2. Fighting Planes,
 3. Bombing Planes,
 4. Dirigibles,
 5. Kite Balloons.

Each of the above mentioned classes is built to use a certain arm or for a specific purpose and although more than one arm may be used, in every case each has a primary weapon.

The Gun:

1. Battleships,
2. Battle Cruisers,
3. Armored Cruisers,
4. Protected Cruisers,
5. Light Cruisers.

The Torpedo:

1. Destroyer,
2. Submarine.

The Mine:

1. Mine Layers,
2. Bombing planes.

The Ram: The ram has lost its prestige except as an incidental weapon which may be used by any vessel if opportunity offers and especially against the submarine, although battleships are built with rams at present it is more for fining the lines than for any other reason.

The battleship is designed primarily for the line of battle to stand up and fight, at present the predreadnaught is considered primarily as belonging to the second line but is placed in the first line in case of numerical inferiority.

The battle cruiser may or may not be placed in the battle line, but its real function is to protect the head of the battle line from attacks by similar vessels as well as destroyer attacks.

The armored cruiser is more or less obsolete but its function at present is to attack similar vessels ahead of the enemy Main Fleet and to drive off enemy destroyer attacks.

The protected cruiser designed primarily as a scout, is used in action as a repeating ship and to ward off torpedo attacks of enemy light forces.

The light cruiser designed primarily as an answer to the destroyer and for scouting is used in action for tactical scouting ahead and astern of the battle fleet and for driving off destroyer attacks.

Destroyer leaders are designed for the purpose shown by their name and also to accompany the fleet as a screen when the sea is

too heavy for destroyers to keep up with the fleet, they are used with destroyers in day action for attacks in conjunction with the attack by the battleships and also for night attacks unsupported and to protect the main fleet from submarine and destroyer attacks.

Submarines were primarily designed for attacks on the enemy major forces to reduce their superiority before an action or to complete the destruction begun in battle also they were supposed to cover a retreat. In the late war they were used principally as commerce destroyers and for attacks on similar vessels.

Mine layers are for laying anchored mines in order to deny the enemy the use of certain waters but they may be used to lay floating mines to place the enemy at a disadvantage as to position due to lack of room to maneuver and also to cover a retreat.

Mine sweepers protect the fleet from anchored mines laid by the enemy.

Aircraft have the functions indicated by their names with the addition of spotting for patrol planes, dirigibles and kite balloons and scouting both strategical and tactical for dirigibles.

Material forces are provided, with us, by Congress and turned over to the Navy to be prepared for battle. It is then that the Naval Officer must consider the moral forces that he must have in his command in order to properly carry out any mission that may be assigned him. The mission which is most likely to be assigned any Battle Fleet is to destroy the enemy fleet.

Constant drill in each ship leads to perfection in the co-operative habit of the combatants which in the end becomes instinctive, and, in the same way, frequent maneuvers of the ships in fleet leads to perfection in their handling, but this is all peace work where signals and orders are easily transmitted and there are no enemy shells striking the ships, destroying the material and tending to break down the hardly acquired discipline and demoralize the personnel.

To overcome the difficulties that may be expected in battle, the entire personnel from the highest to the lowest must be inspired with "the will to win", and it is the duty of the Commander in Chief to assure himself that all his commanders are thoroughly conversant with his plans and principles of action and are loyally ready to carry them out, in order that the "fog of battle" which will surely prevent the handling of all units of the force by the Commander in Chief by signal may not turn victory into defeat.

This plan of handing down plans and principles to subordinates must extend, as should the "will to win" from the highest to the lowest within the scope of their mental capacity and immediate interests.

The good effects of having subordinates thoroughly conversant with plans and principles, and loyally ready to carry them out, is shown in the case of Nelson's battles and the lack of this co-ordination in the trials of Suffren some of whose captains seemed always to violate some plan or principle at the vital moment.

The principles of Naval Tactics formulated by Nelson are as follows:

1. The principal objective is the complete destruction of the enemy's fleet.

2. The concentration of our own strength against the weakness of the enemy.
3. A close and decisive engagement is necessary.
4. Units must mutually support each other.
5. Victory must be followed up.
6. Large fleets must be divided into squadrons whose commanders have full authority.
7. Subordinates must know the plan of the Commander.
8. Something must be left to chance.

These principles are just as true today as when they were enunciated by Nelson, but the methods of application are modified by the changes in armor, armament, and speed.

The World War illustrates the first principle for notwithstanding the depredations of the German raiders and von Spee's force on British commerce and the raids on the east coast of Great Britain, the Grand Fleet was always held ready to attack the German High Seas Fleet if it came out and only one or two major units were detached for minor operations as in the case of the two battle cruisers that took part in the battle of the Falklands and the QUEEN ELIZABETH being sent to bombard the forts at the entrance to the Dardanelles.

The second principle applies with as much force today as ever, but when all naval powers are building battleships with practically the same speed and armament, the usual method of concentration is to have the larger number of units to oppose the enemy. In other words to have the right force at the right place at the right time which means a superior force where it can meet the enemy to advantage, when the enemy can not obtain reinforcements to overcome the disadvantage of his inferior strength.

The third principle is modified by the effect of long range torpedoes, but in case of low visibility every effort must be made to keep the enemy under effective fire regardless of the torpedo menace. This principle of action is covered in our standing orders by providing for a turn away if the enemy can be kept under effective fire but if not the turn shall be towards the enemy thus decreasing the range.

Under the fourth principle in the present day vessels in formation are as short distance apart as is considered safe and at the same time allow room to maneuver and all gaps in the battle line due to vessels dropping out are closed as quickly as possible.

Under the fifth principle our instructions provide for following up the enemy while he is demoralized by defeat, with the idea of the complete destruction of his forces, the only exception being that night attacks by major forces are generally not very effective and light forces using torpedoes should be used at night.

Acting under the sixth principle, after the Commander in Chief has informed his commanders of his plans and indicated his general line of action on coming in contact with the enemy, he can not expect to direct the operations of the van or the rear (the position of the Commander in Chief is usually the center) nor can he necessarily see and be in a position to seize any momentary advantage which may occur by which the tide of battle may be turned strongly in his favor, but, in accordance with our instructions, Squadron and Division Commanders are given the authority to seize these advantages; particularly the commanders of cruisers and destroyers, while commanders of battleship units are only limited by the necessity for carrying out Nelson's fourth principle of mutual support.

The seventh principle naturally follows the sixth in order that no matter what happens to the flagship and the Commander in Chief the plans will be carried out and the forces will coordinate their action to the common end without signals from the flagship.

The eighth principle says in other words that war can not be made without risk and that it is never possible to assure success. The only thing possible is to try to provide for all contingencies.

BYNG'S ACTION OFF MINORCA.

In considering this action it is necessary to consider the orders under which Byng was acting, which no doubt influenced him greatly in his failure to renew the action when opportunity offered.

Byng's orders in condensed form were: To proceed to Gibraltar with ten ships of the line and if any French squadron had passed the straits to detach such part of his force as necessary to make the Halifax squadron of six ships superior to this force: if none had passed to proceed to Minorca without delay and relieve that place if it had been attacked and if not to blockade the French in Toulon. In addition he was to protect Gibraltar and English shipping in the Mediterranean and in case of the escape of a French force from Toulon to the Atlantic was to send a proportionate part of his force back to England returning in person with this force.

On Byng's arrival at Gibraltar May 2d, he received word that 14,000 French troops held Minorca and were besieging the citadel of Port Mahon.

Byng, on receiving this message, began to see difficulties in the way of relieving Port Mahon and in seeing these difficulties was seconded by the Governor of Gibraltar.

Finally after trying to fill his landing compliment from Gibraltar, which was refused by the governor, Byng sailed on May 8th, and sent a letter ahead to Blakeney, who was in command at Mahon, stating that he had Fusiliers on his vessels to reinforce the garrison, but if the garrison were reinforced his fleet would be so depleted that they would be in no condition to meet the enemy.

The above letter was never delivered as the French had closed the port and, as the frigate was trying to attract the attention of the garrison, the French fleet under Galissoniere appeared and the frigate was recalled.

The British admiral decided to attack and made the signal for chase but on seeing the French standing toward him in battle formation he made signal to form line ahead, due to the light winds he was not able to form line and attack that day.

Next morning it was misty with but few of the enemy in sight, but orders were given to chase these and, in order to keep in touch with his chasing vessels, Byng tacked in shore and was standing northwest with a southwest wind.

About seven the weather cleared and the enemy was sighted about twelve miles to the southeast.

Byng reformed his fleet in line ahead and shortly after eleven stood away on a south-southwest wind with the intervals closed to half a cable.

The French were seen heading about west northwest in line of battle and Byng closed the wind on the opposite tack, each force trying to cross ahead of the other to gain the weather gauge.

Byng's fleet was in two divisions, the first, led by himself, of seven ships, and the second of six ships lead by Rear Admiral Temple West, the flagships being in the center of the divisions.

Galissoniere's fleet was in three divisions of four ships each, but his ships were all cleaner, faster, more fully manned and heavier armed.

About half past twelve a shift of wind to southwest gave Byng the advantage and the French had to shorten sail and their van bear up to prevent their line being cut, a point which was noted by Byng at the time.

This shift of wind threw the French line into some confusion and some of the officers of the fleet thought that Byng would bear up and attack at this time but, as this would have meant a change of plan, Byng only eased off a little and allowed the French to reform on the port tack, the two fleets passing on opposite tacks on courses not quite parallel.

Byng stood on with his van beyond the rear of the French line before tacking in order to be able to bear down on the enemy with his broadsides bearing, not giving the enemy a chance to rake, as would have been the case had he tacked when abreast their rear.

On the British fleet starting to tack, beginning from their rear, the French backed their topsails to prevent a concentration on their rear, which slowing of the French fleet caused Byng to order all to tack together to hasten the maneuver.

According to the "Fighting Instructions," the rear British ship, which had now become the leader, should, immediately on coming around, have steered down for the leading enemy ship, but the captain of the *DEFIANCE* failed to do so and, although Byng tried to indicate his intentions by signal, he was unable to transmit his idea exactly due to the lack of certain signals in the signal book.

Finally Byng signalled "engage" and Temple West's division immediately bore down on the enemy van and engaged their opposites.

At this time the fact that Temple West's division was much nearer the enemy than Byng's caused the latter to be much delayed in coming into action, which delay was greatly increased by lasking down and by the *INTREPID*, the last ship of the leading division, interfering and causing the rear division to have to back its topsails to get clear. During this delay the distance between the two British divisions was greatly increased and Galissoniere promptly seized the opportunity and tried to pass through the line and double the leading British division but Byng was able to frustrate this maneuver and close on the French rear.

After this failure to break the line, Galissoniere, forced to give way, bore up to leeward to reform his line; at this time about half past five the action was broken off and not renewed.

Byng's view was that it was not practicable to chase as he was not superior to the enemy, a condition that was considered vital at this time for a chase, although during the action he

regretted that he had not a few more ships that he might issue the order. Under the circumstances he considered it his duty to protect his crippled ships and moreover it might be considered that Byng, having given up all hope of raising the siege of Mahon, thought that he must keep his fleet in condition to protect Gibraltar.

The French, although in better condition than the British, made no effort to renew the action and on the third afternoon after the action were sighted by the British, but no attempt was made to engage as the British ships had not all been repaired.

The action as fought did not reflect any special credit or discredit on Byng if the "Fighting Instructions" of that day are taken into consideration. Allowance must be made for the fact that his plans were sound and that his chances of a much more successful action were ruined by the failure of the Captain of the *DEFIANCE* to carry out the "Fighting Instructions."

What caused Byng's Court Martial was not so much his action with the enemy as his decision, reached after a council of war, to abandon Minorca and return to Gibraltar.

This action brings out the necessity for keeping the range at both ends of the line as nearly equal as possible in order to obtain the maximum effect from your fire and not to allow the enemy to concentrate on one end of your line.

RUSSO-JAPANESE WAR.

SORTIE OF AUGUST 10, 1904.

On August 10, 1904, the Russian Squadron, consisting of six battleships, four cruisers and seven destroyers, was forced to leave PORT ARTHUR due to the closing in of the Japanese Army on the place.

They assempled in the outer harbor beginning about 8:00 a.m., and at 9:00 a.m., headed for CAPE SHANTUNG at 13 knots, their intention was to escape to VLADIVOSTOK.

Almost immediately the First Japanese Squadron, consisting of four battleships and two armored cruisers, with about forty destroyers is sighted to port standing to the southwest, a little later a Division of Japanese cruisers is sighted on the starboard quarter. Both Japanese forces steer converging courses and gain in the chase, while the Russians continue towards VLADIVOSTOK until noon, by which time a second division of Japanese cruisers has come up to starboard.

During the advance of the Russians, Japanese destroyers have been strewing the waters with objects which resemble mines and this evidently makes the Russian Admiral decide to turn, for he turns to the northeast with his battleships in column and his cruisers and destroyers on the off side of the battleships.

The Japanese First Squadron continues on a southwest course crossing ahead of the Russians until it joins the Cruisers and then turns east followed by the two cruisers divisions.

At 1:00 p.m., fire was opened by both sides at extreme range and continued until 5:00 p.m., the range then being about 7500 yards, the Russians in the meantime having changed course to southeast about 2:00 p.m., and later to east parallel to the Japanese.

About 6:30 p.m., a shell struck the conning tower of the

CZAREVITCH, killing Admiral Withoeft and destroying the helm control.

Some accounts say that the RETIVSAN stood on down to within 3,000 yards of the Japanese line in order to draw the fire from the CZAREVITCH but others accounts say that Admiral Ukhtomsky immediately turned about, assembled the remaining battleships, and headed for PORT ARTHUR, leaving the flagship to its fate.

The Russian cruisers which as far as reported had done nothing up to this time, made a determined attack and broke through the Japanese line, but only for the purpose of flight.

Although all of the Russian ships were attacked by Japanese destroyers during the night no torpedoes were effective, even the CZAREVITCH, which only made four knots, arriving safely at KIAO CHAU the following afternoon.

This sortie illustrates the lack of desire to fight on both sides and also, on the part of the Russians, an entire lack of ideas as to the proper method of attempting to carry out their mission, for if they wished to escape why did they sail in daylight instead of at night.

When the Russians first sighted the First Japanese Squadron they had the advantage of six battleships to four battleships and two armored cruisers besides their cruisers and, although the Japanese had more torpedo craft, they had never shown themselves to be very effective. If the Russians had attacked this squadron they had every chance of defeating them before reinforcements could arrive, but it would seem that the idea of a decisive engagement never was considered for a moment.

The way the CZAREVITCH escaped after having run amuck, according to some accounts disorganizing the Japanese line as well as the Russian, shows that a determined attack would have probably so surprised the Japanese that the entire Russian fleet, or at least a large part of it, would have broken through and reached VLADIVOSTOK, for the Japanese in this action did not show any great desire for a decisive action in fact they seemed to be doing everything in their power to conserve their ships probably due to the idea of being ready to meet the Baltic Squadron.

In this action the question of the position of the Fleet Flagship in an action is due for consideration.

On both sides the flagships lead the main forces and they were the worst damaged of their respective forces, the conning tower of the MIKASA also being struck.

In small forces such as these it is much easier to handle the forces by follow the leader movements, the flagship leading, and greatly reduces the number of signals which must be made, at the same time the Commander-in-Chief has a clearer view of what is ahead.

In larger forces it is usual for the formation to provide for the Fleet Flagship to be near the center but it is believed that the advantage of position of the flagship at the head of the column as regards maneuvering a small force, which is naturally expected to and must act more quickly than a large, more than counter balances the disadvantage of the chance of receiving the concentrated fire from the enemy.

THE BATTLE OF JUTLAND.

The information at present available regarding this battle is such that it must be considered almost entirely from the British

point of view.

The battle divides itself into three phases, first the battle cruiser action, second the main fleet action and third the night action.

During the first phase, the First and Second Battle Cruiser Squadrons and the Fifth Battle Squadron (British) make contact with and engage five German Battle Cruisers on southerly courses, the British trying to get between the enemy and their bases and the Germans retiring toward their battle Fleet.

On sighting the German Battle Fleet the British turn to the westward through one hundred and eighty degrees and head north back toward their own Main Fleet, in the mean time the German Battle Cruisers turn to the eastward through one hundred and eighty degrees and head north following the British and trying to hold them until their battleships are in action.

The British turn gradually to the eastward as the position of their battleships is learned and on making contact the four remaining battle cruisers (two have been sunk) take station ahead and to the eastward of the battleships and the Fifth Battle Squadron, after sighting the entire British Battle Line and realizing its position take station to the westward.

In the second phase, Admiral Jellicoe after receiving very little information and, at the last contradictory information, finally sights the German Fleet, deploys on a southeasterly course on the left wing and stands down to cap the German Fleet which is heading northeast.

On sighting the British Fleet, the German Battle Cruisers turned to the south in succession followed by the battleships and the British, in order to close the range, finally formed line of division guides 110 on a course 166, the British Battle Cruisers followed the turn of the Germans and the British Fleet was menaced by torpedoes from the German ships, one of which hit the MARLBOROUGH but did not cause her to leave the line.

At this period the British fire seemed to be very effective notwithstanding the smoke screens laid by the German destroyers and the mist which prevailed.

The Germans continued to turn away in column and sent out destroyers which fired torpedoes from ahead, of the British column at a range of about 6,500 yards which caused Admiral Jellicoe to turn the battleships to port 22 degrees.

At the same time the Germans turned by simultaneous movement to the westward under cover of smoke screens, and, although they were sighted and attacked by the battle cruisers for a short time about 8:20 p.m., the battleships did not again have an opportunity to fire.

The turn to port by the British to avoid the torpedoes did not clear their wake for fifteen passed through the battle line although no hits were made.

The day action being completed and the Germans as far as known heading to the west or northwest, Admiral Jellicoe felt that he was between the enemy and his bases, as a night action was more or less a matter of luck, and if he closed for attack would subject his ships to strong night torpedo attacks, decided to stand south in line of squadron guides, distance one mile to insure the squadrons being in sight of each other and not being mistaken for an enemy.

During the night there were several contacts by the British light forces with the enemy battle fleet which showed the enemy to have continued their turn to starboard and to be northeast of the British headed to the southeast toward their bases.

On the first of June at daylight, 2 a.m., the British battle fleet was turned north and formed in column in order to be ready to engage the enemy if encountered, in the meantime gathering the scattered forces together into fleet formation, which was not accomplished until about 9 a.m.

Finally the enemy not being sighted the fleet returned to its bases.

In this battle Jellicoe violated three of Nelson's principles: "The principle objective is the complete destruction of the enemy's fleet," "A close and decisive engagement is necessary", and "Victory must be followed up", and he might also be said to have violated "Something must be left to chance", which expressed in other words would be "War cannot be made without risk."

In the first place the formation of the battle fleet was such that it took an excessive length of time to deploy and in deploying the divisions were forced to greatly increase the distance from the Germans thus not being able to take advantage of the turn in column of over ninety degrees made by the Germans after sighting the British Battleships. It would also seem that no allowance was made for any mistake in reporting the positions of the enemy although the British forces had been engaged for some time and in their maneuvering would naturally be doubtful of their exact positions, this was particularly the case with the light cruisers; a formation such as our battle formation four would have allowed a much quicker deployment and would have placed the three right wing divisions in a position to have opened fire immediately and would not have increased their distance from the turning point of the Germans.

When it is considered that this was the first opportunity, so long waited for, to engage the German High Seas Fleet, it is surprising that Admiral Jellicoe should have allowed any torpedo menace to have prevented his keeping close touch with the enemy as all his ships had been trained to avoid torpedoes and there were expert lookouts posted for giving warning of torpedoes whose wakes were plainly visible much to the surprise of Admiral Jellicoe who had been informed that the Germans had been able to develop a torpedo that showed practically no wake.

There is no question but the strategic situation had a considerable effect on Admiral Jellicoe's decisions for he felt that the entire question of victory or defeat of the Allied cause depended on the control of the sea and that as long as the British forces were superior there was no danger of loss of this control and therefore the superiority should not be risked in order to gain a temporary advantage.

It is claimed by some that a decisive victory would have allowed the British to open the Baltic Sea and assist the Russians to land troops on the north coast of Germany thus drawing men from the Western Front besides allowing them to supply Russia with arms of which they were in great need and which could only be forwarded at this time through the Arctic; however, whether this is true or not, the British at the Battle of Jutland, although they did not destroy the German High Seas Fleet, so completely demoralized it that no second attempt was made by the Germans to engage in a fleet action and dispute the control of the sea.

Vice Admiral Beatty carried out the principle of a close and decisive action as far as possible but the formation of his major ships in scouting when the speed was only nineteen and a half

knots has never been explained, for the distance between the battle cruisers and the Fifth Battle Squadron was so great that these vessels were unable to have any decisive effect on the battle cruiser action on account of the long range, while if they had been close to the battle cruisers they should have been exceedingly effective during practically the entire run of the battle cruisers south.

Two tactical maneuvers were brought out by this action, these are the "turn away" from torpedo attack and the very skillful maneuver of the Germans in turning away and escaping from a superior force under cover of torpedoes and smoke screens.